



Research & Innovation Policy Briefing



Canada's universities train the innovators of tomorrow that are needed in every region of Canada. To make sure that young talents are able to access a dynamic environment across Canada, we need to support research capacity of all universities. Photograph courtesy of Nathalie St-Pierre, UQAM

With more support Canada's comprehensive and smaller universities will drive big innovation

We must support all universities with better access to research funding so that professors across Canada can train our next generation of innovators and strengthen our communities.



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Opinion

A strong innovation culture is the foundation of successful modern societies driving our economic growth and our standard of living.

A persistent national challenge remains. Canada is consistently ranked as a mid-level innovator. More recently we have fallen

further behind the world's most innovative economies. A recent Conference Board of Canada report shows that Canada has fallen three positions to 12th amongst 16 comparable countries.

Our young people consistently score well in math and science, but Canada is not fully translating this early advantage into our university programming and reaping the benefits of research opportunities that drive innovation capacity. Among those aged between 25-34 with a bachelor's degree, Canada ranks 17th. When we look at the number of Canadians in this same age group with a master's or doctorate degree, Canada lags further behind in 26th place.

Fresh thinking is needed to reverse these trends—especially how we support university research. We need to reconsider the often-overlooked potential of our smaller universities.

Canadian governments have recently put forward generous funding programs that are focused on our largest universities. However, the vast majority (85 per cent) of Canada's one hundred universities, often of small or medium size, many operating outside large urban centres, remain highly underrepresented in terms of scientific research funding from federal government granting agencies.

The impact is real. If we consider 2017 federal competitions, these universities share between

them respectively 10 per cent and 14 per cent of the \$3.1-billion in grants allocated by the *Canada First Research Excellence Fund* (CFREF) and *Canada Excellence Research Chairs* (CERC). Despite educating 56 per cent of Canadian students, these universities are disadvantaged by biased funding program rules, that overvalue the large concentrated of research teams. The scientific potential of these university research professors, students and partners, as well as their contribution to a diversity of knowledge or their impact on Canadian communities are not being captured by funding programs.

With the development of communication technologies and the use of digital tools, researchers no longer need to be grouped under the same institution or under the same physical roof. For instance, researchers from the North and Western Canada can be in the same research excellence team as those in Newfoundland and Labrador or in Toronto. Collaboration is undeniably essential to gather expertise and leverage talent within Canada and the world.

This new connectivity is seen in many successful networks, such as the *Réseau Québec Maritime*. Under the leadership of the Université du Québec à Rimouski (UQAR), researchers from more than 150 organizations have been brought together to pursue sustainable and responsible mar-

itime development solutions. As well, the new *Réseau Inondations Intersectoriel du Québec* (RIISQ) brings together researchers from 16 universities from Québec, France, the United States and 30 partners to inform global decision-makers concerned with flood risk management. Based at the Université du Québec à Montréal (UQAM) this strategic cluster is bringing together broad research skill sets and local expertise to drive and disseminate new knowledge. The impact of climate change and the floods we have seen again this year speak to the growing importance of their work.

The research capacity of these universities can pay big dividends by increasing opportunity and demand for the many scientific skills necessary for graduate training programs. As underlined by the Government of Canada's own advisory panel report on *Federal Support for Fundamental Science* (Naylor Report), it is not a question of the amount of public funding invested in research but instead optimizing training programs to provide a dynamic environment for our graduate students across Canada.

Canada's universities train the innovators of tomorrow. Moreover, their research and training programs are already aligned with the distinct socioeconomic challenges faced by regional economies, making the development of

these universities a top Canadian priority.

As the federal government looks to elevate our innovation capacity and increase the proportion of Canadians with university diplomas, Canada must better leverage the research and training contribution of all its universities. Talented young people can be found in every region. They have a real thirst for knowledge and opportunity. The possibility of staying close to home makes a real difference: one out of four students living outside of big urban centres in the province of Quebec would not have undertaken post-secondary studies without the existence of a university in their nearby area.

Canada contributes five per cent of the world's scientific production and can make an even greater impact on the world's biggest challenges. Addressing environmental, health, safety, transportation, and technology challenges requires local knowledge as well as global expertise.

We must support all universities with better access to research funding so that professors across Canada can train our next generation of innovators and strengthen our communities.

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